

Work Order ID 97203

February-14-13 3:07:41 PM

97203

Page 1

Item ID: D3201-3

03201-3
B07203

Accept

Revision ID:

Item Name: Doubler

Start Date: 2/14/13

Start Qty: 8.00

8
8 12*

Required Date: 2/27/13

Req'd Qty: 8.00

Reference:

Approvals: Process Plan: *MLJ*

Date: 13-02-20

Tooling: SPC (Y/N):

QC:

Date:

Cust Item ID:

Customer:

Setup Start *NS1*

Stop *NS2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
100	Rev B	0.00							
100	FLOW WATER JET								
Waterjet	Memo	0.00							
FLOW CNC Waterjet	1-Cut as per Dwg D3201 Dwg Rev: <i>B</i> Prog Rev: <i>B</i> 2								
2024.050	Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110	Memo	0.00							
QC									
Quality Control									
120	QC8- Inspect parts - second check	0.00	12-8-12	12-8-12	12-8-12	12-8-12	12-8-12	12-8-12	12-8-12
120	Memo	0.00							
QC									
Quality Control									

N900040100

Setup Start *NR1*

Stop *NR2*

Run Start *NR1*

Stop *NR2*

*Ac
13.08.12**Ac
13.08.12**12-8-0**12*

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS									
				Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other							
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector				
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved															
FAULT CATEGORY															
Landing Gear Bending Centre Not Concentric to O/S Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion Turning Sequence Wave/Twist in Tube				General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing Finish Folio				Grain Hardware Inspection Incomplete Instructions Incomplete/Unclear Maintenance Mislabeled Misread Offset Out of Calibration Out of Sequence Outside Dimensions				Ovalized Over/Under tolerance Part Incorrect Part Lost/Missing Part Moved Positioned Wrong Power Loss/Surge		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled	

Work Order ID 97203

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97203

Page 2

Item ID: D3201-3

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Doubler

Stop

NS2

Start Date: 2/14/13 Start Qty: 8.00

8

Cust Item ID:

Required Date: 2/27/13 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

130

Small Fab

0.00

W/K 88

Small Fab

Memo

0.00

Small Fab

Deburr Stack

140

140

NC BRAKE

0.00

12

88
1/18/13

Brake NC

Memo

0.00

Brake NC

I-Bend as per Dwg D32012-Scribe part# and Batch# per dwg D3201

150

150

QC5- Inspect part completeness to step on W/O

0.00

DAS

27

9-89

QC

Memo

0.00

13
88

Quality Control

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/> Equip/Tooling <input type="checkbox"/> Operator <input type="checkbox"/> Material <input type="checkbox"/> Setup <input type="checkbox"/> Other <input type="checkbox"/> Process <input type="checkbox"/> Supplier <input type="checkbox"/> Training <input type="checkbox"/> Unapproved <input type="checkbox"/>											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube <input type="checkbox"/>	General										
	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/>							
	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>								
	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>								
	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>								
	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>								
	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>								
	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>								
	Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>	Other <input type="checkbox"/>								
	Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>									
	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>									
	Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>									

Work Order ID 97203

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97203

Page 3

Item ID: D3201-3

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Doubler

Stop

NS2

Start Date: 2/14/13

Start Qty: 8.00

8

Cust Item ID:

Required Date: 2/27/13

Req'd Qty: 8.00

8

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

Chemical Conversion Coat per QSI005 4.1

0.00

160

HandFinish

Memo

0.00

12 76.13.8.20

Hand Finishing

170

QC3- Inspect Part Finish

0.00

170

QC

Memo

0.00

Quality Control

AS
21
20

B.8.20

13

180

Identify as per dwg & Stock Location: ST033

0.00

180

Packaging

Memo

0.00

Packaging

AS
21
20

B.8.20

12

8
B.8.20

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Use-as-is <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Machining <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>
Part No. _____			Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Supplier <input type="checkbox"/>	Quality <input type="checkbox"/>	Other <input type="checkbox"/>
NCR No. _____			Work Order Update <input type="checkbox"/>								
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											
FAULT CATEGORY											
Landing Gear				General							
Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube <input type="checkbox"/>	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>							
	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>							
	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>							
	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>							
	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>								
	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>								
	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	Other <input type="checkbox"/>							
	Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>									
	Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>									
	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>									
	Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>									

Work Order ID 97203

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97203

Page 4

Item ID: D3201-3

Accept

Revision ID:

Item Name: Doubler

Start Date: 2/14/13 Start Qty: 8.00

8

Required Date: 2/27/13 Req'd Qty: 8.00

8

Reference:

Approvals: Process Plan:

Date:

Tooling:

QC:

Date:

SPC (Y/N):

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Quality Control

Memo

0.00

Cust Item ID:
Customer:Run Start ***NR1***
Stop ***NR2***Date:
Date:Tool ID Tool # Plan
Code Accept Reject
Qty Qty Reject
Number Number Insp.
Stamp*- MLO 13-08-21*
MLO 13-08-20

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
				Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>			
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	<input type="checkbox"/>										
Equip/Tooling	<input type="checkbox"/>										
Operator	<input type="checkbox"/>										
Material	<input type="checkbox"/>										
Setup	<input type="checkbox"/>										
Other	<input type="checkbox"/>										
Process	<input type="checkbox"/>										
Supplier	<input type="checkbox"/>										
Training	<input type="checkbox"/>										
Unapproved	<input type="checkbox"/>										
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio		<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions		<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other	

Picklist Print

February-14-13 10:53:23 AM

Page 1

Work Order ID: 97203

Parent Item: D3201-3

Parent Item Name: Doubler

Start Date: 2/14/13

Required Date: 2/27/13

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP Rev: A Removed from 9 Digit
IPP Rev:B Now on Waterjet
IPP Rev C added scribing NCR262

06-01-25 JLM
06-08-14 JLM
07.11.29 EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.050 2024-T3 .050 sheet		Purchased	No			100	sf	0.0000	0.045	0.3789472			

5/24/13 → 555
13.08.12
3810

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____	DISPOSITION			AGAINST DEPARTMENT/PROCESS				
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
	Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

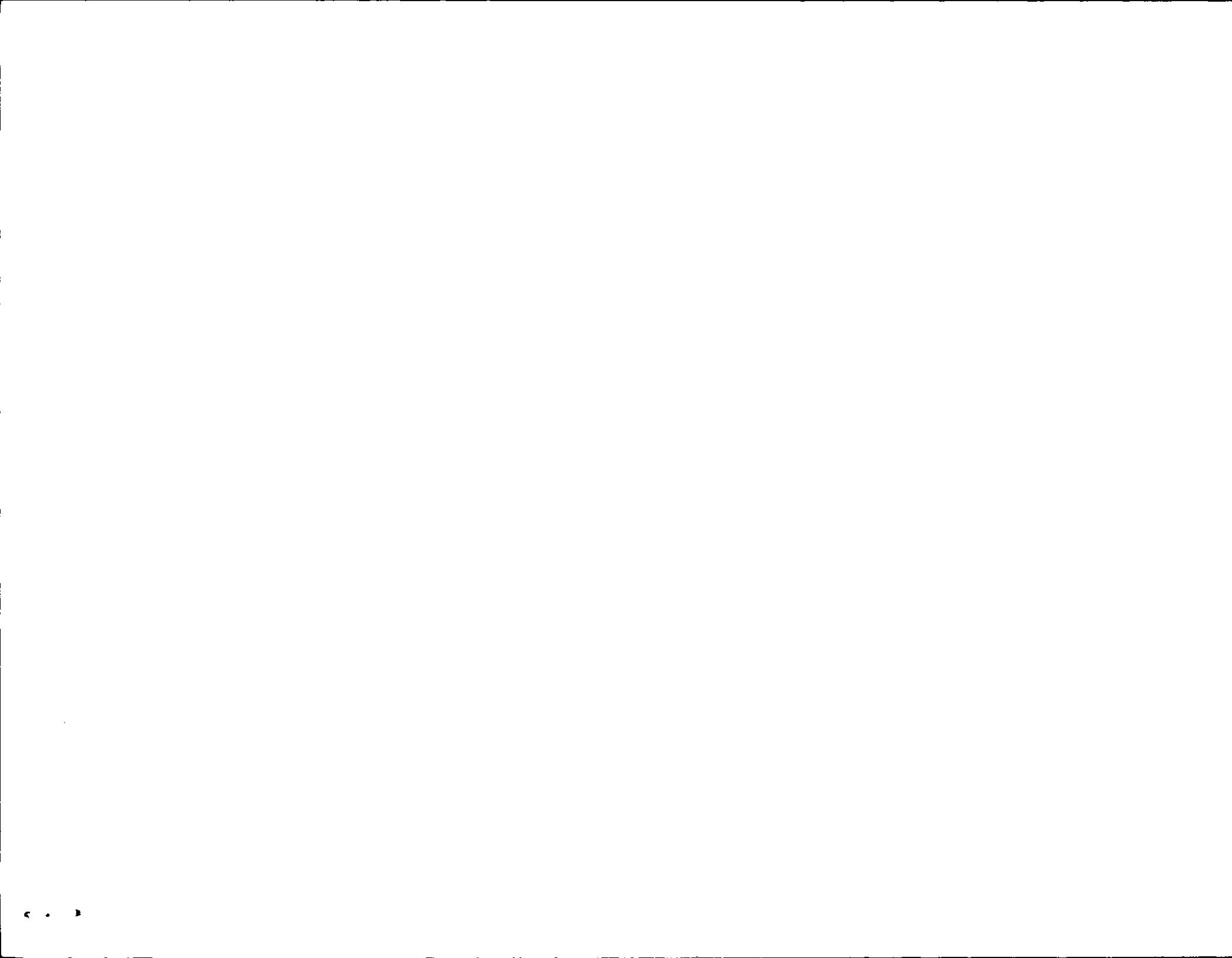
Landing Gear	General					
	Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>	
	Centre Not Concentric to O/S <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>	
	Cracks <input type="checkbox"/>	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>	
	Crushed/Crimped <input type="checkbox"/>	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>	
	Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>		
	Heat Treat <input type="checkbox"/>	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>		
	Inspection Strip in Tube <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>		
	Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>			
	Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>			
	Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>			
	Wave/Twist in Tube <input type="checkbox"/>	Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>			

DART AEROSPACE LTD	Work Order:	97203
Description: Doubler	Part Number:	D3201-3
Inspection Dwg: D3201	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Measured by:	<u>Ae</u>	Audited by:	<u>27</u> <u>09</u>	Preliminary Approval:	
Date:	13.08.12	Date:	13.08.12	Date:	

Rev	Date	Change	Revised by	Approved
A	03.11.28	New Issue	KJ/RF	
B	10.10.27	FAI sheet created for each part for D3201-3/-4	KJ	 

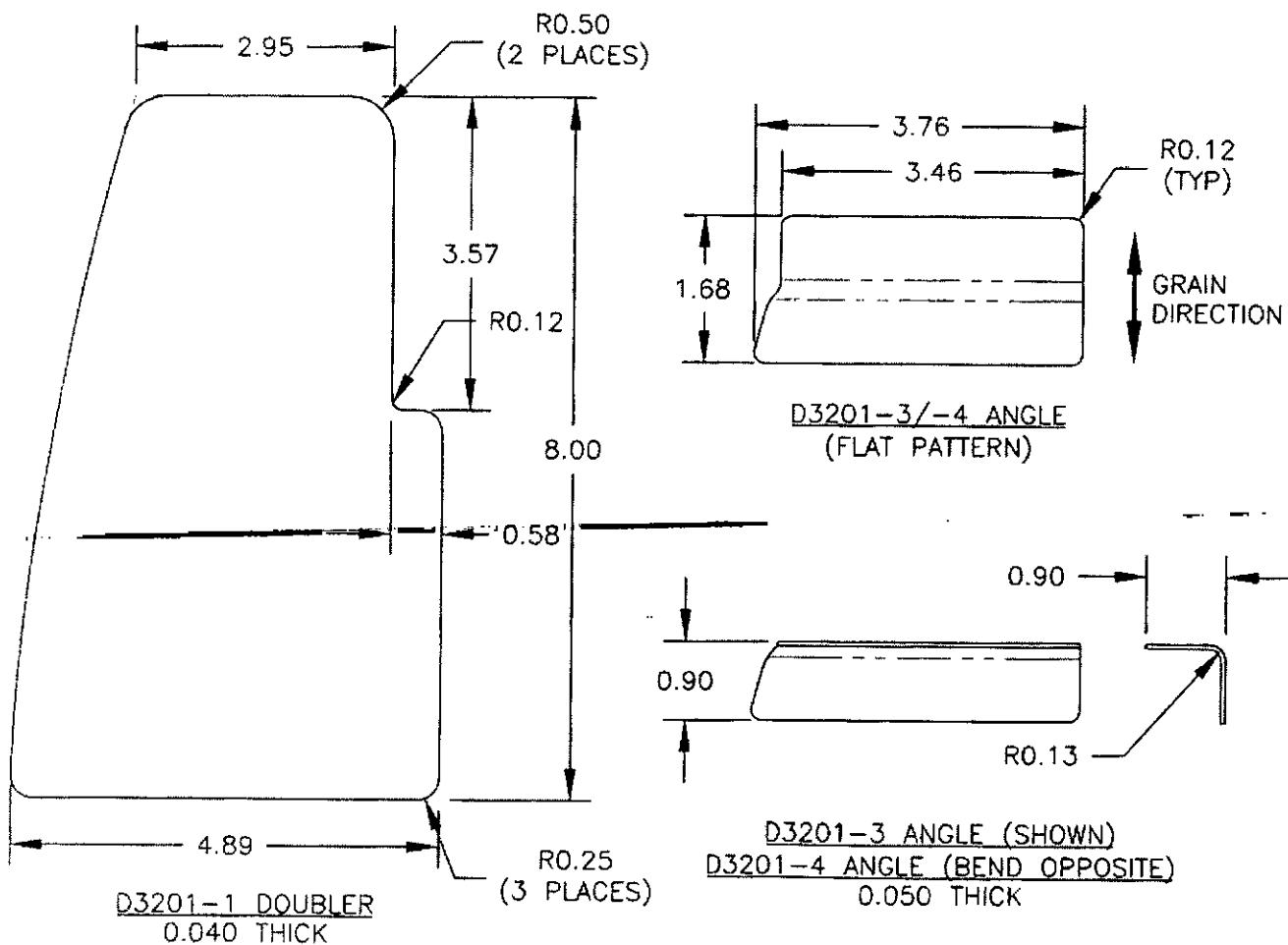




03.11.03
COPY ISSUED

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED	APPROVED	DRAWING NO.	REV. B	
		D3201		SHEET 1 OF 1
DATE		TITLE	SCALE	
03.11.03		DOUBLER	1:2	
A	03.08.07	NEW ISSUE		
B	03.11.03	MODIFY D3201-1, ADD D3201-3/-4		

03.11.03



D3201-1/-3/-4 DOUBLER

- 1) MACHINE PARTS PER DWG FILE "D3201-B1.DWG"
- 2) MATERIAL: 2024-T3 ALUMINUM SHEET (QQ-A-250/4)
(REF. DART SPEC M2024T3S)
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES

100-111
02-20-31
DW30261

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